



GENI-Lab, a Project to Realize Genius Machines:

We seek a \$3M USD commitment over three years, to pursue Genius Machines—robots with genius-level intellect and sexy android bodies. We propose this start with a \$1.5M infusion, supplemented with \$750k per year for two years thereafter. With these funds, we will demonstrate spectacular milestones and deliverables, showing major improvements in performance in the intelligence of robots and software, fusing numerous AGI systems including OpenCog and Hanson software into a whole smart android system. These milestones will include early breakthroughs in hardware and software, and a beautiful interactive android ready to show publically in less than a year. Year three will culminate in a human-level general intelligence controlling our human-scale android hardware. The robot will be reproducible at low cost, with an expansive API and software, and will serve as a standardized platform for additional AGI research around the world, as well as real-world applications. We contend that this project will generate huge leaps forward in A.I., accelerating progress towards true genius machines within a decade.

Funding sought: \$3M, over 36 months

Major milestones:

- 9 months: complete walking android with beautiful face, conversationally intelligent.
- 12 months: robot gives a TED talk, hangs with TEDsters, gives interviews to reporters.
- 24 months: robot capabilities integrate the best of AI today: navigate a space, sustain conversation with people indefinitely, see objects, faces, expressions, gestures, etc. The robot convinces most people that it's alive and aware.
- 36 months: the robot is as smart as an adult narrowly, generally as smart as a small child.



GENI-Lab, a few more details:

Major Goals:

1. **Development of a Beautiful Female Android (or Gynoid to be more accurate)**
\$700k achieves one fully functional prototype, including basic animated intelligence, walking body, expressive face, and designed for mass-production
 - a. **Hardware Milestones and Deliverables:**
 - i. In 6-9 months, we will produce a Gynoid (attractive female android)
 - ii. With a gorgeous, realistic face, the world's best facial expressions, integrated with a humanlike walking body, with gestural hands and arms.
 - iii. Month 9: fully integrated android tested, with basic walking, gestures and interactivity, including animation controls, face tracking, motion tracking, basic conversational interactivity
 - iv. Month 12: Refinements completed, so that the robot is ready to show at TED 2014. It should walk on stage, give a TED talk, and interact with people afterwards, giving interviews to the press media.
 - v. Month 12: Designs ready to go into mass production, for a late-2014 delivery
 2. **Brilliant Mind Development (a.k.a. Software)**
\$700k per year for 3 years (\$2.1 M total) achieves general intelligence in an android
 - a. Open Cog integration with Hanson Robotics system
 - b. Improved robot controls, including further development/Integration of Bio-Drives motivational systems, and integration with ROS, SLAM, additional perception abilities (gestures, objects, gaze detection, etc), and professional artistry/animation
 - c. Open source/ Maker outreach to other labs, to expand and enhance our results
 - d. **Software Milestones and Deliverables:**
 - i. Month 18: Tested integration of Open Cog with ROS, RoboCup SLAM capabilities, additional perception, learning, & navigation of a space.
 - ii. Month 24: Ability to sustain a natural conversation with people for over 20 minutes, convincing 1/2 of people surveyed that the robot is human-level intelligent.
 - iii. Month 36: General intelligence par with a 3 year old child (plus showing narrow genius—such as with wordplay, games, etc.). This will be tested by standard psychometrics, as well as by convincing 50% of people that the robot is human-level intelligent.
 3. **GENI-Lab Non-Profit**
\$50k founding costs, plus 50k per year for 3 years (\$200k total) builds a workspace
 - a. To provide the infrastructure for the proposed research, we will found the GENI-Lab as 501(c)(3) non-profit, and setup our lab in Hong Kong, where we will integrate Hanson and Goertzel efforts, and efforts with our factory engineers